

19/1291**B.Sc. (Third Year) Examination, 2019****COMPUTER SCIENCE****Third Paper****(Introduction to DBMS-SQL & Software****Engineering Concept)****Time : Three Hours****Maximum Marks : 75**

Note : Answer **five** questions in **all**. Question **No. 1** is **compulsory**. Answer **one** question from each unit. Marks allotted to each questions are indicated on the right-hand side of the question.

Note : The answers to short answer type questions should not exceed 200 words and the answers to long answer type questions should not exceed 500 words.

P.T.O.**19/1291**1. Give short answers of the following: $5 \times 7 = 35$

- (i) Differentiate between physical and logical data independence.
- (ii) What are the responsibilities of DBA?
- (iii) Why is concurrency control needed?
- (iv) Discuss the method of drawing ER diagram with example.
- (v) Differentiate between a flow chart and data flow diagram.
- (vi) Differentiate between conceptual view and user view.
- (vii) How is software different from a program? Write a brief note on software crisis.

Unit-I

2. What are the problems arising out of concurrent data access? What are the various methods of handling concurrency? 10

OR

3. What do you mean by DBMS? What are its components? Discuss different kind of database users.

Unit-II

4. What is data model? The network data model is a superset of hierarchical model. Explain with help of example. 10

OR

5. Consider the following table.
Employee (Emp_Name, Dept_Name, Salary)
Write SQL statements for the following
- (i) Find the employee name who is getting lowest salary.
 - (ii) Find the dept name which has highest salary.
 - (iii) Find all the department where more than 60 employes are working.

Unit-III

6. Explain spiral model in detail. 10

OR

7. What is software requirement specification? Develop the complete SRS document for Hospital management system.

Unit-IV

8. Explain how COCOMO can be used for software cost estimation. 10

OR

9. Discuss top down and bottom up approaches of integration testing. Give an example of each.